

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A system for detecting a downhole condition in a wellbore during a non-drilling wellbore operation, the system comprising:
 - a tool string formed of a tubular to be disposed within the wellbore;
 - a workpiece configured to be conveyed into the wellbore using the tool string, the workpiece configured to perform the non-drilling wellbore operation within the wellbore and configured to convey fluid thereacross; and
 - a condition sensing tool within the tool string for sensing the downhole condition, the condition sensing tool configured to be conveyed into the wellbore with the workpiece using the tool string; and
 - a transmitter configured to transmit information indicative of the downhole condition to the surface.
2. (Original) The system of claim 1 wherein the workpiece comprises a fishing device.
3. (Withdrawn) The system of claim 1 wherein the workpiece comprises a cutting tool.
4. (Withdrawn) The system of claim 3 wherein the cutting tool comprises an underreamer.
5. (Withdrawn) The system of claim 3 wherein the cutting tool comprises a casing cutter.
6. (Original) The system of claim 1 wherein the downhole condition is a condition from the set consisting essentially of torque, weight, tool string compression, tool string tension, speed of tool string rotation, vibration, and direction of tool string

rotation.

7. (Currently Amended) The system of claim 1 wherein the condition sensing tool of the system comprises:

an outer housing defining a sensor section therein; and at least one sensor retained within the sensor section for detection of the downhole condition; and a controller positioned at the surface that is configured to control the workpiece.

8. (Currently Amended) ~~The system of claim 7~~ A system for detecting a downhole condition in a wellbore during a non-drilling wellbore operation, the system comprising:

a tool string formed of a tubular to be disposed within the wellbore;

a workpiece configured to be conveyed into the wellbore using the tool string, the workpiece configured to perform the non-drilling wellbore operation within the wellbore;

a condition sensing tool within the tool string for sensing the downhole condition, the condition sensing tool configured to be conveyed into the wellbore with the workpiece using the tool string, wherein the condition sensing tool ~~further~~ comprises:

an outer housing defining a sensor section therein; and at least one sensor retained within the sensor section for detection of the downhole condition;
and

a processing section for receiving data relating to the downhole condition and transmitting the data to a remote receiver.

9. (Currently Amended) ~~The system of claim 7~~ A system for detecting a downhole condition in a wellbore during a non-drilling wellbore operation, the system comprising:

a tool string formed of a tubular to be disposed within the wellbore;

a workpiece configured to be conveyed into the wellbore using the tool string, the workpiece configured to perform the non-drilling wellbore operation within the wellbore;

a condition sensing tool within the tool string for sensing the downhole condition, the condition sensing tool configured to be conveyed into the wellbore with the workpiece using the tool string, wherein the condition sensing tool further comprises;

an outer housing defining a sensor section therein; and at least one sensor retained within the sensor section for detection of the downhole condition;
and

a processing section for receiving data relating to the downhole condition and storing the data.

10. (Original) The system of claim 1 further comprising a power section.

11. (Currently Amended) A condition sensing tool for use within a wellbore during a non-drilling operation to detect at least one downhole condition within the wellbore, the condition sensing tool being deployable via a tubular tool string and comprising:

an outer housing defining an axial fluid flowbore therethrough and being coupled to the tubular tool string, the axial fluid flowbore being configured to convey a fluid thereacross during the non-drilling operation;

a sensor section formed in the housing; and

at least one sensor in the sensor section for detecting the at least one non drilling downhole condition from the set of conditions consisting essentially of torque, weight, tool string compression, tool string tension, speed of tool string rotation, vibration, and direction of tool string rotation, wherein the outer housing, the sensor section, and the at least one sensor are configured to be conveyed into the wellbore with the tubular tool string.

12. (Currently Amended) ~~The condition sensing tool of claim 11 further comprising~~ A condition sensing tool for use within a wellbore during a non-drilling operation to detect at least one downhole condition within the wellbore, the condition sensing tool being deployable via a tubular tool string and comprising:
 an outer housing defining an axial fluid flowbore therethrough and being coupled to the tubular tool string;
 a sensor section formed in the housing; and
 at least one sensor in the sensor section for detecting the at least one non drilling downhole condition from the set of conditions consisting essentially of torque, weight, tool string compression, tool string tension, speed of tool string rotation, vibration, and direction of tool string rotation, wherein the outer housing, the sensor section, and the at least one sensor are configured to be conveyed into the wellbore with the tubular tool string; and
 a power section within the housing for supplying power to the sensor section.
13. (Currently Amended) ~~The condition sensing tool of claim 11 further comprising~~ A condition sensing tool for use within a wellbore during a non-drilling operation to detect at least one downhole condition within the wellbore, the condition sensing tool being deployable via a tubular tool string and comprising:
 an outer housing defining an axial fluid flowbore therethrough and being coupled to the tubular tool string;
 a sensor section formed in the housing; and
 at least one sensor in the sensor section for detecting the at least one non drilling downhole condition from the set of conditions consisting essentially of torque, weight, tool string compression, tool string tension, speed of tool string rotation, vibration, and direction of tool string rotation, wherein the outer housing, the sensor section, and the at least one sensor are configured to be conveyed into the wellbore with the tubular tool string; and
 a processing section for receiving data relating to the downhole condition

and transmitting the data to a remote receiver.

14. (Currently Presented) A method of performing a non-drilling downhole wellbore operation, comprising:
integrating a workpiece and a condition sensing tool into a tool string formed of a tubular;
conveying the workpiece and the condition sensing tool into a wellbore using the tool string formed of the tubular;
actuating the workpiece to conduct a non-drilling downhole operation; ~~and~~
detecting at least one downhole condition with the condition sensing tool; and
transmitting information indicative of the downhole condition to a surface location.
15. (Currently Amended) The method of claim 14 further comprising the step of adjusting the non-drilling operation after received the transmitted ~~transmitting~~ information indicative of the downhole condition ~~to a remote location.~~
16. (Previously Presented) A method of performing a non-drilling downhole wellbore operation comprising:
integrating a workpiece and a condition sensing tool into a tool string;
disposing the tool string into a wellbore;
actuating the workpiece to conduct a non-drilling downhole operation;
detecting at least one downhole condition with the condition sensing tool while operating the workpiece; and
storing information indicative of the downhole condition within a processing section of the condition sensing tool.
17. (Previously Presented) A method of performing a non-drilling downhole wellbore operation comprising:
integrating a workpiece and a condition sensing tool into a tool string;

disposing the tool string into a wellbore;
actuating the workpiece to conduct a non-drilling downhole operation;
detecting at least one downhole condition with the condition sensing tool; and
wherein

- a) the workpiece comprises a fishing tool for engaging a stuck member within the wellbore;
- b) the non-drilling downhole operation comprises a fishing operation to remove a stuck member from the wellbore; and
- c) the condition sensing tool detects weight and torque.

18. (Original) The method of claim 14 wherein:

- a) the workpiece comprises an anchor latch;
- b) the non-drilling downhole operation comprises unthreading of a threaded connection within the wellbore; and
- c) the condition sensing tool detects tool string compression and tool string tension.

19. (Withdrawn) The method of claim 14 wherein:

- a) the workpiece comprises a casing cutter;
- b) the non-drilling downhole operation comprises a casing cutting operation, and
- c) the condition sensing tool detects speed and direction of rotation of the tool string.

20. (Withdrawn) The method of claim 14 wherein:

- a) the workpiece comprises an underreamer;
- b) the non-drilling downhole operation comprises an underreaming operation, and
- c) the condition-sensing tool detects torque.

21. (Withdrawn) The method of claim 20 wherein the condition sensing tool also detects weight, speed of rotation, and direction of rotation.
22. (Previously Presented) A method of performing a non-drilling downhole wellbore operation comprising:
integrating a workpiece and a condition sensing tool into a tool string;
disposing the tool string into a wellbore;
actuating the workpiece to conduct a non-drilling downhole operation;
detecting at least one downhole condition with the condition sensing tool; and
wherein:
a) the workpiece comprises a packer;
b) the non-drilling downhole operation comprises retrieval of the packer from a set position within the wellbore; and
c) the condition-sensing tool detects torque and weight.
23. (Withdrawn) The method of claim 14 wherein:
a) the workpiece comprises a pilot mill;
b) the non-drilling downhole operation comprises milling away by the pilot mill of a portion of a tubular member within the wellbore; and
c) the condition sensing tool detects at least some of the downhole conditions from the set of conditions consisting essentially of torque, direction of rotation, speed of rotation, weight, tool string compression, and tool string tension.
24. (Withdrawn) The method of claim 14 wherein:
a) the workpiece comprises a washover tool;
b) the non-drilling downhole operation comprises a washover operation for cutting away portions of a formation surrounding a stuck object within the wellbore; and
c) the condition sensing tool detects torque.

25. (Withdrawn) The method of claim 24 wherein the condition sensing tool further detects speed and direction of rotation.
26. (Currently Amended) A system for detecting a downhole condition in a wellbore during a non-drilling wellbore operation, the system comprising:
a tool string formed of a tubular to be disposed within a wellbore;
a workpiece within the tool string for performing a non-drilling wellbore operation within the wellbore, the workpiece being configured to convey fluid thereacross;
a condition sensing tool within the tool string for sensing the downhole condition;
and
a transmitter coupled to the tool string transmitting signals to the surface using mud pulse telemetry.
27. (Previously Presented) The system of claim 1 wherein the tool string is configured to rotate.
28. (Currently Amended) A system for detecting a downhole condition in a wellbore during a non-drilling wellbore operation, the system comprising:
a tool string formed of a tubular to be disposed within a wellbore, wherein the tool string is configured to at least one of: (i) circulate fluid in the wellbore; and (ii) pressurize the wellbore with fluid;
a workpiece within the tool string for performing the non-drilling wellbore operation within the wellbore; ~~and~~
a condition sensing tool within the tool string for sensing the downhole condition; and
a transmitter configured to transmit information indicative of the downhole condition to a surface location.
29. (Currently Amended) A condition sensing tool for use within a wellbore during a

non-drilling operation to detect at least one downhole condition within the wellbore, the condition sensing tool comprising:

an outer housing defining an axial fluid flowbore therethrough and being coupled to a tubular tool string, the axial fluid flowbore being configured to convey a fluid thereacross during the non-drilling operation;

a sensor section defined within the housing;

at least one sensor for detecting the at least one non-drilling downhole condition from the set of conditions consisting essentially of torque, weight, tool string compression, tool string tension, speed of tool string rotation, vibration, and direction of tool string rotation; and

a transmitter proximate to the sensor section transmitting signals to the surface using mud pulse telemetry.

30. (Currently Amended) A method of performing a non-drilling downhole wellbore operation, comprising:

integrating a workpiece and a condition sensing tool into a tool string formed of a tubular, the workpiece being configured to convey fluid thereacross;

disposing the tool string into a wellbore;

actuating the workpiece to conduct the non-drilling downhole operation;

detecting at least one downhole condition with the condition sensing tool; and

transmitting information indicative of the downhole condition to a remote location, wherein the signal is transmitted using at least one mud pulse.

31. (Currently Amended) A method of performing a non-drilling downhole wellbore operation, comprising:

integrating a workpiece and a condition sensing tool into a tool string formed of a tubula, the workpiece being configured to convey fluid thereacrossr;

disposing the tool string into a wellbore;

actuating the workpiece to conduct the non-drilling downhole operation;

detecting the at least one downhole condition with the condition sensing tool; and rotating the tool string.

32. (Currently Amended) A method of performing a non-drilling downhole wellbore operation, comprising:

integrating a workpiece and a condition sensing tool into a tool string formed of a tubular;

disposing the tool string into a wellbore;

actuating the workpiece to conduct the non-drilling downhole operation;

detecting the at least one downhole condition with the condition sensing tool; and

circulating fluid in the wellbore; and

transmitting information indicative of the downhole condition to a surface location.

33. (Currently Amended) A method of performing a non-drilling downhole wellbore operation, comprising:

integrating a workpiece and a condition sensing tool into a tool string formed of a tubular;

disposing the tool string into a wellbore;

actuating the workpiece to conduct the non-drilling downhole operation;

detecting the at least one downhole condition with the condition sensing tool; and

pressurizing the wellbore with fluid; and

transmitting information indicative of the downhole condition to a surface location.